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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/691,279

10/22/2003

Michael J. Wookey

30014200-1119

4924

58328

7590

11/14/2006

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EXAMINER

HICKS, MICHAEL J

ART UNIT

PAPER NUMBER

2165

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/691,279	<b>Applicant(s)</b> WOOKEY ET AL.	
	<b>Examiner</b> Michael J. Hicks	<b>Art Unit</b> 2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

1. Claims 1-12 Pending.

### ***Response to Arguments***

2. In Applicants response dated 9/6/2006, Applicant asserts that the foster reference is invalid due to the claim for priority to provisional application number 60/469767. Examiner respectfully disagrees that the instant application may claim priority from provisional application 60/469767.

Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e) as follows: The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 60/469767, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. Specifically, the limitations of determining whether the subscriber subscribes to at least one additional data type

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after receiving the first data type and querying for at least one additional data type responsive to a determination that the subscriber subscribes to the at least one additional data type.

In provisional application 60/469767, on pages 19-21, in which Applicant discusses the information relating to the present invention (e.g. in the section titled Asynchronous Intellectual Capital Query System), it is disclosed that it is already known or assumed that the more than one data types are subscribed to, thus no determination of whether the subscriber subscribes to additional data types is needed, and thus not disclosed. Furthermore, the present claims indicate that querying for the at least one additional data type is responsive to the making of this determination. Even if the determination of subscribing to at least one additional data type was disclosed, in 60/469767 a query is only made (e.g. data is only retrieved) regarding the second/at least one additional data type if it is not otherwise received within a specified time period. No mention is made that the query is made responsive to the subscription to the second/additional data type being identified. Because of these differences in the disclosure of Application 60/469767, which is relied upon for priority, and the claimed invention of the instant application, Application 60/469767 does not qualify as a priority document, thus the priority date for the instant application is considered to be the filing date of the instant application and the Foster reference is considered to be relevant prior art.

As applicant presented no other arguments regarding the rejection of the pending claims under USC 103(a), the rejection will be amended to reflect the amendments made to the claim and maintained.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Lehner et al ("Building an Information Marketplace Using a Content and Memory Based Publish/Subscribe System", Advanced Techniques in Personalized Information Delivery; Fredrick-Alexander Universitat Erlangen-Nurnberg, Pgs 27-46; 2001 and referred to hereinafter as Lehner) in view of Foster et al. ("OSGA Data Services", Data Access and Integration Services; August 14, 2003 and referred to hereinafter as Foster).

As per Claims 1, 6, 11, and 12, Lehner teaches a computer-implemented method in a data processing system having a program in a memory, computer readable medium, and system comprising: asynchronously receiving a first data at a subscriber (i.e. "...the proposed PubScribe service relies on the asynchronous communication model of publish and subscribe, a very well known concept to implement asynchronous communication in distributed systems...Thus, traditional publish/subscribe systems implement a document based asynchronous and anonymous dispatching of messages." The preceding text excerpt clearly indicates that data is

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asynchronously received at a subscriber through the publish/subscribe system.) (Figure 1.1; Page 28, Paragraphs 2-3); determining whether the subscriber subscribes to at least one additional data after receiving the first data (i.e. *"From a structural point of view, the PubScribe system provides customized storage of former messages to be able to provide subscription services not only to the current state of an entity (current weather condition) but also to access previously published messages to computer the accurate result of a subscription..."* The preceding text excerpt clearly indicates that after a data is received, it is recorded so that after the reception of the data, it may be referred back to in order to determine subscription to, and initiate delivery of, additional data.) (Page 29, Paragraph 3); and querying for at least one additional data responsive to a determination that the subscriber subscribes to the at least one additional data (i.e. *"Ex-nunc subscriptions are based on a set of messages. This set of messages is constructed starting from an empty set at the time of registering a subscription...Evaluations in those applications areas are not only based on snapshot data (current message), but on historical data either stored locally within the subscription management system or within an underlying database (usually a data warehouse)." The preceding text excerpt clearly indicates that if it is determined that the subscriber subscribed to additional data after receiving the first data, the additional data is found via query in the database and returned to the subscriber as part of the set of messages.) (Page 28, Paragraph 4; Page 29, Paragraph 1; Page 32, Paragraph 3). Also note that performing the aforementioned operations requires a memory and a processor.*

Lehner fails to teach that the data received is a datatype.

Foster teaches that the data received is a datatype (i.e. *"For example, a file containing geographical data might be made accessible as an image via a data service that implements a 'JPEG Image' virtualization, with SDEs defining size, resolution, and color characteristics, and operations provided for reading and modifying regions of the image. Another virtualization of the same data could present it as a relational database of coordinate-based information, with various specifics of the schema*

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*(e.g., table names, column names, types) as SDEs, and SQL as its operations for querying and updating the geographic data....A many-to-one mapping can also occur when different service interfaces are defined to the same underlying data virtualization that provide different subsets of available functionality..."* The preceding text excerpt clearly indicates that the data may be a datatype (e.g. a template/class for enabling a user to view information in an application specific manner.) (Page 2, Paragraph 4; Page 5, Paragraph 5).

It would have been obvious to one skilled in the art at the time of Applicants invention to modify the teachings of Lehner with the teachings of Foster to include that the data received is a datatype with the motivation of providing a service which implements one or more of four base data interfaces to enable access to, and management of data resources in a distributed environment, including service instances and dynamic service creation (Foster, Abstract).

As per Claims 2 and 7, Lehner teaches asynchronously receiving at least one of the additional data (i.e. *"Thus, traditional publish/subscribe systems implement a document based asynchronous and anonymous dispatching of messages... Ex-nunc subscriptions are based on a set of messages. This set of messages is constructed starting from an empty set at the time of registering a subscription..."* The preceding text excerpt clearly indicates that the additional data is received a the subscriber as part of a set of messages, wherein messages are received asynchronously.) (Page 28, Paragraphs 2-3; Page 32, Paragraph 3).

Lehner fails to teach that the data received is a datatype.

Foster teaches that the data received is a datatype (i.e. *"For example, a file containing geographical data might be made accessible as an image via a data service that implements a 'JPEG Image' virtualization, with SDEs defining size, resolution, and color characteristics, and operations*

*provided for reading and modifying regions of the image. Another virtualization of the same data could present it as a relational database of coordinate-based information, with various specifics of the schema (e.g., table names, column names, types) as SDEs, and SQL as its operations for querying and updating the geographic data...A many-to-one mapping can also occur when different service interfaces are defined to the same underlying data virtualization that provide different subsets of available functionality..."* The preceding text excerpt clearly indicates that the data may be a datatype (e.g. a template/class for enabling a user to view information in an application specific manner.) (Page 2, Paragraph 4; Page 5, Paragraph 5).

It would have been obvious to one skilled in the art at the time of Applicants invention to modify the teachings of Lehner with the teachings of Foster to include that the data received is a datatype with the motivation of providing a service which implements one or more of four base data interfaces to enable access to, and management of data resources in a distributed environment, including service instances and dynamic service creation (Foster, Abstract).

As per Claims 3 and 8, Lehner fails to teach the first datatype has a metadata that describes a data and a reference to the data, the data being maintained separately from the first datatype, the metadata including a key that enables the first datatype to be joined with other datatypes having the key in their respective metadata, and wherein determining whether the subscriber subscribes to additional datatypes comprises identifying the key in the first datatype.

Foster teaches the first datatype has a metadata that describes a data and a reference to the data (i.e. *"data virtualization...can involve simple data access or computational transformations of underlying data...SDEs may also be used to describe 'metadata' about data*



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*virtualization, such as who produced the data, its purpose, and abstract identifiers and properties of portions of the data.*" The preceding text excerpt clearly indicates that the datatype/virtualization includes metadata that describes the data and a reference to the data (e.g. the data must be referenced in order to be accessed.) (Page 5, Paragraph; Page 6, Paragraph 4), the data being maintained separately from the first datatype (i.e. *"Mappings between data virtualizations and underlying data sources and services may be one-to-one, many-to-one, one-to-many, or many-to-many."* The preceding text excerpt clearly indicates that because many different mapping are possible, the data and the datatypes/virtualizations are maintained separately.) (Page 5, Paragraph 6), the metadata including a key that enables the first datatype to be joined with other datatypes having the key in their respective metadata (i.e. *"For example, a file system might support data virtualizations for the file-system as a whole...arbitrary subsets of files in the file system...and/or individual files."* The preceding text excerpt clearly indicates that many datatypes may be linked via a metadata key (e.g. in this case the key may be the source of the data, as above).) (Page 5, Paragraph 6), and wherein determining whether the subscriber subscribes to additional datatypes comprises identifying the key in the first datatype. (i.e. *"For example, a file system might support data virtualizations for the file-system as a whole...arbitrary subsets of files in the file system...and/or individual files...A many-to-one mapping can also occur when different service interfaces are defined to the same underlying data virtualization that provide different subsets of available functionality, perhaps for reasons of access control."* The preceding text excerpt clearly indicates that if the subscriber had access to (e.g. subscribed to) one granularity in the given example, all subsequent granularities would also be accessible using the source key; or an access control key can be made available to link accessible datatypes/virtualizations for the user.) (Page 5, Paragraph 6).

It would have been obvious to one skilled in the art at the time of Applicants invention to modify the teachings of Lehner with the teachings of Foster to include the first datatype has a metadata that describes a data and a reference to the data, the data

being maintained separately from the first datatype, the metadata including a key that enables the first datatype to be joined with other datatypes having the key in their respective metadata, and wherein determining whether the subscriber subscribes to additional datatypes comprises identifying the key in the first datatype with the motivation of providing a service which implements one or more of four base data interfaces to enable access to, and management of data resources in a distributed environment, including service instances and dynamic service creation (Foster, Abstract).

As per Claims 4 and 9, Lehner teaches that a storage controller is queried for the additional data (i.e. *"Ex-nunc subscriptions are based on a set of messages. This set of messages is constructed starting from an empty set at the time of registering a subscription...Evaluations in those applications areas are not only based on snapshot data (current message), but on historical data either stored locally within the subscription management system or within an underlying database (usually a data warehouse)."* The preceding text excerpt clearly indicates that a database/storage controller is queried for the additional data.) (Page 28, Paragraph 4; Page 29, Paragraph 1; Page 32, Paragraph 3).

Lehner fails to teach that the data is a datatype.

Foster teaches that the data is a datatype (i.e. *"For example, a file containing geographical data might be made accessible as an image via a data service that implements a 'JPEG Image' virtualization, with SDEs defining size, resolution, and color characteristics, and operations provided for reading and modifying regions of the image. Another virtualization of the same data could present it as a relational database of coordinate-based information, with various specifics of the schema (e.g., table names, column names, types) as SDEs, and SQL as its operations for querying and updating the geographic data...A many-to-one mapping can also occur when different service interfaces are defined to the same underlying data virtualization that provide different subsets of available*

*functionality...*" The preceding text excerpt clearly indicates that the data may be a datatype (e.g. a template/class for enabling a user to view information in an application specific manner.) (Page 2, Paragraph 4; Page 5, Paragraph 5).

It would have been obvious to one skilled in the art at the time of Applicants invention to modify the teachings of Lehner with the teachings of Foster to include that the data is a datatype with the motivation of providing a service which implements one or more of four base data interfaces to enable access to, and management of data resources in a distributed environment, including service instances and dynamic service creation (Foster, Abstract).

As per Claims 5 and 10, Lehner teaches subscribing to the first data and at least one of the additional data (i.e. *"This paper proposes the PubScribe framework using a content and memory based publish/subscribe system... Ex-nunc subscriptions are based on a set of messages. This set of messages is constructed starting from an empty set at the time of registering a subscription..."* The preceding text excerpt clearly indicates that subscriptions are possible, and more specifically Ex-nunc type subscriptions are available which would include a subscription to the first and additional data.) (Abstract; Page 32, Paragraph 3).

Lehner fails to teach that the data is a datatype.

Foster teaches that the data is a datatype (i.e. *"For example, a file containing geographical data might be made accessible as an image via a data service that implements a 'JPEG Image' virtualization, with SDEs defining size, resolution, and color characteristics, and operations provided for reading and modifying regions of the image. Another virtualization of the same data could present it as a relational database of coordinate-based information, with various specifics of the schema (e.g., table names, column names, types) as SDEs, and SQL as its operations for querying and updating*

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*the geographic data....A many-to-one mapping can also occur when different service interfaces are defined to the same underlying data virtualization that provide different subsets of available functionality..."* The preceding text excerpt clearly indicates that the data may be a datatype (e.g. a template/class for enabling a user to view information in an application specific manner.) (Page 2, Paragraph 4; Page 5, Paragraph 5).

It would have been obvious to one skilled in the art at the time of Applicants invention to modify the teachings of Lehner with the teachings of Foster to include that the data is a datatype with the motivation of providing a service which implements one or more of four base data interfaces to enable access to, and management of data resources in a distributed environment, including service instances and dynamic service creation (Foster, Abstract).

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Points of Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Hicks whose telephone number is (571) 272-2670. The examiner can normally be reached on Monday - Friday 8:30a - 5:00p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on (571) 272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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